

39. (Withdrawn) The instrumented navigation system of Claim 38 further comprising one or more input modules for collecting information and for transmitting said information to either of said watercraft-based computer or said land-based computer.
40. (Withdrawn) The instrumented navigation system of Claim 39 wherein at least one of said one or more sensors is a GPS receiver.

REMARKS

Claims 1, 6, 15 and 16 have been amended to include limitations presented in dependent claims.

Claims 2, 3, 4, 5, 11, 12, 13 and 14 have been cancelled.

Claims 36-40 have previously been withdrawn.

In the Official Action mailed November 3, 2006, claims 1-8 and 19-27 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,063,240 to Isbister et al. ("240 patent"). Claims 9-18 and 28-35 were rejected under 35 U.S.C. § 103(a) over the '240 patent in view of Worthsmith, U.S. Patent No. 6,995,662 ("662 patent") and Syska, U.S. Patent No. 5,808,193 ("193 patent").

The claims have been amended to include limitations present in the original claims and to more clearly define that the invention is drawn to an on-board system. The process of information from on-board sensors and the display is on-board so that the pilot of the vessel can appropriately navigate the vessel related to land based structure without a need for land based equipment. Applicants' invention can share information with ground based systems, but it processes and displays information independently of ground based equipment.

The primary reference, the '240 patent, is a land based system, it requires extensive land based equipment including two telemeter systems, and six to nine land based receivers/antenna (see Figure 1). The teachings of the '240 patent is to use a land based system with merely a communication and a display on the vessel for receiving and displaying the intelligence generated by equipment on shore. A single vessel based transmitting beacon is on-board (reference 11). But the information derived from the beacon's position is sensed and processed shore-side (column 2, lines 50-70).

For many reasons, the teachings of the '240 patent is to use shore-based multiple radar systems and shore-based sensors while all processing is done on-shore. This system may be desirable where there are a large number of vessels and few shore stations. Applicants' invention places the sensors and processors on-board the vessel so as to minimize the shore investment and create a system for docking that can be independent of shore-based equipment. The pilot can operate free of real-time shore-based processing.

Both the '662 patent and the '193 patent require shore-based precise targets (references 14 and 16 in the '662 patent; and reference 10 in the '193 patent). Neither gives the operator any indication of the true position of the vessel. The '662 patent merely gives an alignment between two reflected parallel beams. The '662 patent depends upon precise positioning of reflector 14 and 16 shore-based. "The only sensor required to detect the returning pattern is the eye of the pilot of the watercraft 10" ('662 patent, column 7, lines 67 through column 8, line 1). In addition, the use of the beams depend upon atmospheric conditions (fog operation could be impossible). Applicants' system uses GPS which is independent of both shore apparatus and weather.

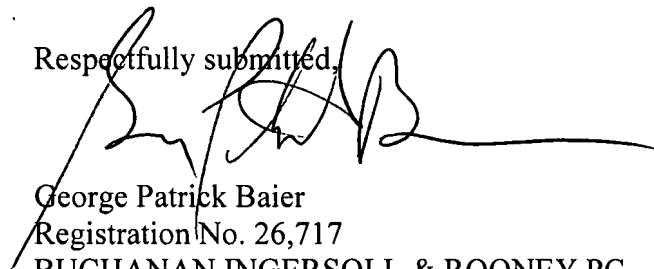
While the Official Action states the teaching of Worthsmith suggests GPS ("column 3, lines 62-67 at least") the complete reading of the '662 reference is "such systems may be fixed to the dock or mounted on the vessel. In any case, such systems are very expensive and require

considerable training and skill due to their complexity. They are thus, like the Lidar Systems described above, impractical for many important applications, including the vast majority of watercraft intended for personal use" (column 3, line 67 through column 4, line 6). This paragraph, while mentioning GPS, clearly teaches one skilled in the art to avoid GPS systems and utilize less complex beam devices. The teachings of the '662 patent is not to consider the utilization of GPS but quite to the contrary; the '662 patent teaches away from GPS based systems.

CONCLUSION

The amended claims presented are drawn to a vessel based system. A reconsideration and allowance of all claims is respectfully requested.

Respectfully submitted,



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